

ELECTRICAL SPECIFICATIONS

SECTION 16.010 – ELECTRICAL

PART 1 – GENERAL

- 1.01 GENERAL CONDITIONS
- A. WORK UNDER THIS DIVISION SHALL BE SUBJECT TO THE GENERAL AND SPECIAL CONDITIONS AND, TOGETHER WITH THIS DIVISION, ARE A PART OF THE CONTRACT.
- 1.02 SCOPE

- A. THE WORK REQUIRED FOR THIS DIVISION INCLUDES LABOR, MATERIALS, EQUIPMENT, APPURTENANCES AND SERVICE TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVED BY UNDERWRITERS' LABORATORIES AND SHALL BEAR THE UL LABEL WHERE LABELING SERVICE IS AVAILABLE.
- 1.02 MANUFACTURER. WIRING DEVICES SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

1.03 APPLICABLE SPECIFICATIONS, CODES AND STANDARDS

- A. THE LATEST EFFECTIVE EDITIONS OF THE FOLLOWING STANDARDS, CODES, ETC., AS APPLICABLE FORM A PART OF THESE SPECIFICATIONS THE SAME AS IF WRITTEN FULLY HEREIN AND SHALL BE FOLLOWED AS MINIMUM REQUIREMENTS. MINIMUM REQUIREMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING HIGHER GRADE MATERIALS AND WORKMANSHIP THAN THEREIN SPECIFIED.

1. NATIONAL ELECTRICAL CODE
2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
3. UNDERWRITERS' LABORATORY (UL)
4. OSHA REQUIREMENTS
5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
6. NATIONAL UNDERWRITERS' LABORATORY (UL)
7. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
8. APPLICABLE LOCAL/CITY/STATE CODES

IN ADDITION, THE NATIONAL ELECTRICAL CODE TOGETHER WITH APPLICABLE STATE AND CITY ORDINANCES OR REGULATIONS SHALL BE CONSIDERED AS ESTABLISHING THE MINIMUM REQUIREMENTS FOR THE WORK UNDER THIS CONTRACT. CONTRACTOR SHALL ASCERTAIN THE EXISTENCE OF AND COMPLIANCE WITH ANY INTERPRETATIONS AND/OR ENFORCEMENT POLICES OF THE LOCAL ENFORCEMENT AGENCIES OR INDIVIDUALS REGULAR TO THIS AREA OR TO CONSTRUCTION OF BETTER/SUPERIOR QUALITY OR LARGER SIZE/CAPACITY THAN REQUIRED BY THE ABOVE RULES AND REGULATIONS. THE PROVISIONS OF THESE REQUIREMENTS SHALL TAKE PRECEDENCE. ANY MODIFICATIONS TO THE CONTRACT WORK REQUIRED BY OTHER AUTHORITIES SHALL BE AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVED BY PRIOR APPROVAL OF ANY ADDITIONAL COSTS TO BE INCURRED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR INVOLVED.

1.04 DRAWINGS

- A. THESE SPECIFICATIONS ARE ACCOMPANIED BY FLOOR PLANS AND DETAILS OF THE BUILDING ELECTRICAL SYSTEMS, AND WHAT IS CALLED FOR BY ONE SHALL BE AS BINDING AS PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, AND PAY PERMIT AND INSPECTION FEES.

1.05 EQUIPMENT MARKING AND PAINTING

- A. SAFETY SWITCHES, PANELBOARDS, SWITCHBOARDS, CABINETS, ETC., SHALL BE PROVIDED WITH PERMANENTLY ATTACHED, ENGRAVED BACKLITE DESIGNATION PLATES TO INDICATE EQUIPMENT OR CIRCUIT CONTROLLED AS DETAILED ON SHEET E-1.

1.06 EQUIPMENT CONNECTIONS

- A. STARTERS, CONTROLLERS, THERMOSTATS, FAN SWITCHES, INDICATING LIGHTS, ETC., AND CONTROL WIRING LESS THAN 120 VOLTS SHALL BE PROVIDED UNDER THE DIVISION PROVIDING THE RESPECTIVE MOTOR AND/OR EQUIPMENT UNLESS OTHERWISE INDICATED. ALL 120 VOLT WIRING SHALL BE PROVIDED UNDER DIVISION 16.000 "ELECTRICAL." B. POWER WIRING AND POWER CONNECTIONS TO ALL EQUIPMENT SHALL BE PROVIDED UNDER DIVISION 16.000 "ELECTRICAL" UNLESS OTHERWISE INDICATED ON THE ELECTRICAL DRAWINGS.
- C. WHEN SUBSTITUTED MOTORS AND/OR EQUIPMENT REQUIRE ELECTRICAL MODIFICATIONS TO SUPPORT SAID MOTORS AND/OR EQUIPMENT, THE COST OF THE ELECTRICAL MODIFICATIONS, ASSOCIATED WORK AND COORDINATION SHALL BE INCLUDED.
- D. DETERMINE ELECTRICAL REQUIREMENTS FOR EACH DIVISION IN ORDER TO FULLY COMPLY WITH THE SPECIFICATIONS. PROVIDE CONNECTIONS FOR OTHER DIVISIONS WHERE REQUIRED. OPERATION OF PROJECT. MAKE CONNECTIONS FOR OTHER DIVISIONS WHERE REQUIRED.

CHILLER #1  
480Y/277 VOLT  
FED FROM MDP2-6

SPECIFICATIONS:

- MAKE: 1/16" ENGRAVING MATERIAL
- SIZE: 1/4" LETTERS (MIN.) PLATE SIZE MAY VARY
- COLOR: COAL BLACK BACKGROUND / WHITE LETTERING

NOTES:

- SELF ADHESIVE
- SEE MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
- VERIFY PLATE SIZE WILL FIT ON EQUIPMENT BEFORE ORDERING.
- PROVIDE LABELS FOR CHILLER PANEL FURNISHED WITH THE CHILLER.

CHILLER PANEL IDENTIFICATION DETAIL

NOT TO SCALE

SECTION 16.050 – MATERIALS AND METHODS

PART 1 – GENERAL

- 1.01 ELECTRICAL MATERIALS FURNISHED UNDER THESE SPECIFICATIONS SHALL BE NEW AND LISTED AND APPROVED BY UNDERWRITERS' LABORATORIES AND SHALL BEAR THE UL LABEL WHERE LABELING SERVICE IS AVAILABLE.
- 1.02 MANUFACTURER. WIRING DEVICES SHALL BE MANUFACTURED BY THE SAME MANUFACTURER.

PART 2 – PRODUCTS

- 2.01 REPLACE OR REPAIR DEFECTIVE EQUIPMENT AND MATERIALS, OR MATERIAL DAMAGED IN THE COURSE OF INSTALLATION OR TESTS.
- PART 3 – EXECUTION

- 3.01 MATERIAL AND EQUIPMENT SHALL BE PROPERLY STORED AND PROTECTED UNTIL INSTALLED.

- 3.02 INSTALL MATERIALS IN A FIRST CLASS AND WORKMANLIKE MANNER AND RUN CONCEALED THROUGHOUT BUILDING, EXCEPT AS INDICATED.

SECTION 16.111 – CONDUIT

PART 1 – GENERAL

- 1.01 CONDUIT SHALL BE RUN CONCEALED, EXCEPT CONDUIT MAY BE EXPOSED ABOVE JOISTS, IN ELECTRICAL ROOMS AND SPACES WITH EXPOSED CONSTRUCTION.

PART 2 – PRODUCTS

- 2.01 CONDUIT AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
- A. INTERMEDIATE METAL CONDUIT – UL – 1242
- B. ELECTRICAL METALLIC TUBING (EMT) – ANSI C80.3

- 2.02 MINIMUM SIZE CONDUIT SHALL BE 3/4" WITH LARGER SIZES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE FOR NUMBER OF WIRES CONTAINED THEREIN.

- 2.03 CONDUIT AND TUBING SHALL BE HOT DIPPED GALVANIZED EXCEPT AS HEREBEFORE SPECIFIED.

- 2.04 INTERMEDIATE METAL CONDUIT SHALL BE PERMITTED WHERE ALLOWED IN ARTICLE 345 OF THE NATIONAL ELECTRICAL CODE.

- 2.05 PROVIDE 0.2" TYPE "XW" EXPANSION FITTINGS WHERE CONDUITS CROSS EXPANSION JOINTS.

- 2.06 PROVIDE 0.2" TYPE "W" CABLE SUPPORTS AS REQUIRED BY ARTICLE 300-19 NEC.

- 2.07 CONDUIT TERMINATIONS ONE AND ONE-QUARTER INCH AND LARGER AND CONDUIT STUDS SHALL HAVE 0.2" TYPE "B" INSULATING BUSHINGS. RIGID CONDUIT TERMINATIONS ONE INCH AND SMALLER SHALL HAVE 0.2" TYPE "A" INSULATING BUSHINGS.

PART 3 – EXECUTION

- 3.01 CONDUIT CONCEALED IN WALLS AND ABOVE CEILING SHALL BE THIN-WALL TYPE ELECTRICAL METALLIC TUBING.

- 3.02 CONDUIT SHALL BE RUN CONTINUOUS BETWEEN OUTLETS WITH A MINIMUM NUMBER OF BENDS.

SECTION 16.120 – WIRE AND CABLE

PART 1 – GENERAL

- 1.01 FEEDER AND BRANCH CIRCUIT WIRE SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ADOPTED EDITION OF THE NEC AND SHALL MEET RELEVANT ASTM SPECIFICATIONS.

PART 2 – PRODUCTS

- 2.01 WIRE SHALL BE COPPER 600 VOLT INSULATION, MINIMUM SIZE NO. 12, TYPE "THIN"/"THIN" (WITH APPROPRIATES BASED ON TYPE "THIN"/"OR "XW" AS APPLICABLE UNLESS OTHERWISE INDICATED ON DRAWINGS. TERMINATIONS AND CONNECTIONS SHALL BE APPROVED FOR THE TYPE/SIZE OF CONDUCTOR BEING USED.
- 2.03 WIRES NO. 10 AND 12 SHALL BE CONNECTED WITH COIL SPRINGS INSERT "WIRE-IN" OR "WING-IN" CONNECTORS. CONNECTORS SHALL BE RATED 600 VOLTS. WIRES NO. 8 AND LARGER SHALL BE JOINED OR TERMINATED WITH PRESSURE TYPE COPPER CONNECTORS.

PART 3 – EXECUTION

- 3.01 ALL WIRING SHALL BE WIRE INSTALLED IN CONDUIT.

- 3.02 WIRE SHALL BE COLOR CODED TO MATCH EXISTING COLOR CODING, AND EACH CIRCUIT CONDUCTOR OF THE SAME COLOR SHALL BE CONNECTED TO THE SAME UNGROUNDED FEEDER CONDUCTOR THROUGHOUT THE INSTALLATION.

- 120/208 VOLT SYSTEM
- PHASE A BLACK
- PHASE B RED
- PHASE C BLUE
- NEUTRAL WHITE
- GROUND GREEN
- 277/480 VOLT SYSTEM
- PHASE A BROWN
- PHASE B ORANGE
- PHASE C YELLOW
- NEUTRAL GRAY
- GROUND GREEN WITH YELLOW STRIPE

HEAT TAPE  
120 VOLT  
FED FROM \*\*\*-\*\*\*

SPECIFICATIONS:

- MAKE: 1/16" ENGRAVING MATERIAL
- SIZE: 1/4" LETTERS (MIN.) PLATE SIZE MAY VARY
- COLOR: COAL BLACK BACKGROUND / WHITE LETTERING

NOTES:

- SELF ADHESIVE
- SEE MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
- VERIFY PLATE SIZE WILL FIT ON EQUIPMENT BEFORE ORDERING.
- FIELD VERIFY CIRCUIT NUMBER.

HEAT TAPE ENCLOSED CIRCUIT BREAKER IDENTIFICATION DETAIL

NOT TO SCALE

SECTION 16.130 – OUTLET BOXES

PART 1 – GENERAL

- 1.01 FUTURE OUTLETS, RECEPTACLES, SWITCHES, DEVICES, ETC., REQUIRING OUTLET BOXES SHALL HAVE STEEL OUTLET BOXES CONSTRUCTED AS REQUIRED BY NATIONAL ELECTRICAL CODE AND INSTALLED AS INDICATED.

PART 2 – PRODUCTS

- 2.01 OUTLET BOXES SHALL BE HOT DIPPED GALVANIZED STEEL TYPE WITH STANDARD KNOCK-OUTS AS REQUIRED FOR CONDUIT TERMINATION. MINIMUM SIZE OF OUTLET BOX SHALL BE FOUR INCHES SQUARE, ONE AND ONE-QUARTER INCHES DEEP, AND SHALL HAVE STEEL OUTLET BOXES CONSTRUCTED AS REQUIRED BY NATIONAL ELECTRICAL CODE AND INSTALLED AS INDICATED. OUTLET BOXES FOR EXPOSED TILE AND BLOCK SHALL BE PROVIDED WITH SQUARE CORNERED TILE RING, SIZE AS REQUIRED.

- 2.02 SHALLOW OUTLET BOXES MAY BE EMPLOYED WHERE CONSTRUCTION PROHIBITS USE OF FOUR INCHES SQUARE, ONE AND ONE-QUARTER INCHES DEEP BOX SPECIFIED ABOVE. CONTRACTOR SHALL CONFORM SUCH INSTALLATION LOCATIONS WITH OWNERS CONSTRUCTION ADMINISTRATION PRIOR TO ROUGH IN.

- 2.03 JUNCTION AND PULL BOXES SHALL BE INSTALLED WHERE INDICATED OR NECESSARY FOR INSTALLATION OF THE ELECTRICAL SYSTEM. JUNCTION OR PULL BOXES NOT OVER 100 CUBIC INCHES IN VOLUME SHALL BE STANDARD OUTLET BOXES. JUNCTION BOXES OVER 100 CUBIC INCHES IN VOLUME SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. JUNCTION BOXES MUST HAVE COVERS AND BE ACCESSIBLE AFTER COMPLETION OF CONSTRUCTION.

PART 3 – EXECUTION

- 3.01 OUTLET BOXES OCCURRING IN WET AREAS SHALL BE CAST AND PROVIDED WITH GASKETS BETWEEN BOX AND WATERPROOF COVER.

- 3.02 CEILING AND BRACKET OUTLETS SHALL BE BOXES SUITABLY SUPPORTED BY HEADERS AND THREE-EIGHTHS INCH BEAMS. FUTURE STUD FOR SUPPORTING FIXTURES AS REQUIRED, IN AREAS OF EXPOSED STEEL BEAMS FUTURE SHALL BE SUPPORTED BY STEEL CHANNEL, AS REQUIRED. FIXTURES WEIGHING OVER 20 POUNDS SHALL BE SUPPORTED INDEPENDENTLY OF BOX.

- 3.03 OUTLET BOXES IN FINISHED AREAS SHALL BE FLUSH MOUNTED WITH BASED PLASTER RINGS AND SHALL BE FLUSH WITH FINISH WALL LINE. SURFACE OUTLETS REQUIRING DEVICE PLATES SHALL BE PROVIDED WITH RAISED COVERS SERVING BOTH PURPOSES.

- 3.04 CONDUITS SHALL BE SUPPORTED AT INTERVALS NOT GREATER THAN TEN FEET AND WITHIN THREE FEET OF ANY BEND AND EVERY OUTLET OR JUNCTION BOX, BOTH HORIZONTAL AND VERTICAL, ROOMS AND AS SPECIFIED BY THE NEC.

- 3.05 CONDUIT SUPPORTS SHALL BE APPROVED WALL BRACKETS, TARGETE STRAP, HANGER, OR PIPE STRAPS. SECURED TO HOLLOW MASONRY WITH TOGGLE BOLTS, TO BRICK AND TO WOOD WITH WOOD SCREWS.

- 3.06 CONDUITS AND CABLES PASSING THROUGH FIRE RATED WALLS SHALL OR PROVIDED WITH UL LISTED ASSEMBLY FIRE SEALS TO MAINTAIN "UL" CLASSIFIED FIRE RATING.

- 3.07 WHERE SEVERAL FEEDERS PASS THROUGH A COMMON PULL BOX OR JUNCTION BOX, THE FEEDERS SHALL BE TAGGED TO INDICATE EXACTLY THEIR ELECTRICAL IDENTIFICATION NUMBER AND PANEL DESIGNATION. MARK SHALL INFORMATION ON COVER OF THE BOX.

SECTION 16.140 – WIRING DEVICES

PART 1 – GENERAL

- 1.01 FINISH AND INSTALL WIRING DEVICES AND SPECIAL DEVICES AS INDICATED ON DRAWINGS.

PART 2 – PRODUCTS

- 2.01 DEVICES SHALL BE AS INDICATED ON DRAWINGS.

- 2.02 DEVICE PLATES SHALL BE SAFIN FINISHED STAINLESS STEEL FOR DEVICE INDICATED.

- 2.03 SPECIAL DEVICES, TIME SWITCHES, ETC., SHALL BE AS NOTED ON DRAWINGS.

PART 3 – EXECUTION

- 3.01 LOCATION OF WIRING DEVICES SHALL BE AS INDICATED ON DRAWINGS OR AS DIRECTED IN FIELD WHERE SPECIFIC REQUIREMENT FOR LOCATION IS REQUIRED. CONTRACTOR SHALL VERIFY LOCATION OF SPECIAL DEVICES PRIOR TO ROUGHING IN.

- 3.02 IDENTIFY EACH RECEPTACLE WITH PANELBOARD AND CIRCUIT NUMBER FROM WHICH IT IS FED. USE HOT STAMPED MACHINE PRINTING WITH BLACK FILLED LETTERING ON FACE OF PLATE. PROVIDE WIRE MARKERS INSIDE OUTLET BOXES ON ALL WIRING.

SECTION 16.170 – DISCONNECT SWITCHES

PART 1 – GENERAL

- 1.01 DISCONNECT SWITCHES SHALL BE RATED 240 OR 600 VOLTS AS APPLICABLE WITH NUMBER OF POLES AND CURRENT RATING AS INDICATED. SWITCHES SHALL BE NON FUSEBLE EXCEPT FUSED TYPE WHERE INDICATED AND SHALL CONFORM TO APPLICABLE NEMA STANDARDS. FINISH AND INSTALL DISCONNECT SWITCHES FOR ALL MOTORS AND EQUIPMENT AS INDICATED ON THE DRAWINGS AND AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND MANUFACTURER'S RECOMMENDATIONS.

PART 2 – PRODUCTS

- 2.01 SWITCHES SHALL BE NEMA TYPE "HD" IN NEMA 3R ENCLOSURE.

- 2.02 SWITCHES SHALL BE HORSEPOWER RATED WHEN USED FOR MOTOR DISCONNECT MEANS AND SHALL BE PROVIDED AS REQUIRED BY NEC WHETHER INDICATED OR NOT.

- 2.03 FUSED SWITCHES SHALL BE PROVIDED COMPLETE WITH FUSES.

- 2.04 SWITCHES SHALL BE MANUFACTURED BY GENERAL ELECTRIC OR SQUARE-D.

PART 3 – EXECUTION

- 3.01 SWITCHES SHALL BE SECURELY MOUNTED TO WALL, STRUCTURE, OR EQUIPMENT.

- 3.02 PROVIDE MISCELLANEOUS ACCESSORIES FOR MOUNTING SWITCHES, INCLUDING STEEL ANGLES WHERE REQUIRED. PROVIDE GALVANIZED STEEL ANGLES IN WET LOCATIONS.

LEGEND

WP DUPEX OR WEATHER RESISTANT CONVENIENCE RECEPTACLE IN WEATHERPROOF OUTLET BOX. MOUNT 24" ABOVE FLOOR.

BRANCH CIRCUITS, RUN CONCEALED IN WALLS, UNDERGROUND AREAS, TICK MARKS INDICATE IN EXPOSED CONSTRUCTION AREAS, TICK MARKS INDICATE NUMBER OF PHASE AND NEUTRAL CONDUCTORS IF OTHER THAN TWO. GROUND CONDUCTOR IS INDICATED AS (7). REFER TO PANELBOARD SCHEDULES FOR CONDUCTOR SIZES.

H-1 HOWERUN TO PANELBOARD, PANELBOARD AND CIRCUIT DESIGNATION AS INDICATED.

EQUIPMENT CONNECTION.

PANELBOARD, 208/120 VOLT, 3 PHASE, 4 WIRE, SOLID NEUTRAL.

DISCONNECT SWITCH, 3P-3 POLE, 100-AMPERE RATING OF SWITCH, FUSED SWITCH, FIELD WIRE, FUSE SIZES AND DOCUMENT ON RECORD DRAWINGS.

30 AMP, 2 POLE, 240 VOLT ENCLOSED CIRCUIT BREAKER WITH 6-30mA GROUND FAULT EQUIPMENT PROTECTION IN NEMA 3R ENCLOSURE. PROVIDE GROUND FAULT PROTECTION IN SEPARATE ENCLOSURE IF NECESSARY. COORDINATE OVERCURRENT RATING AND VOLTAGE WITH EQUIPMENT PROVIDED.

LINE WEIGHT LEGEND

DARK SOLID LINE TYPE INDICATES NEW TO BE PROVIDED

DARK DASHED LINE TYPE INDICATES ITEM TO BE REMOVED

LIGHT SOLID LINE TYPE INDICATES EXISTING TO REMAIN

ABBREVIATIONS

ATS AUTOMATIC TRANSFER SWITCH

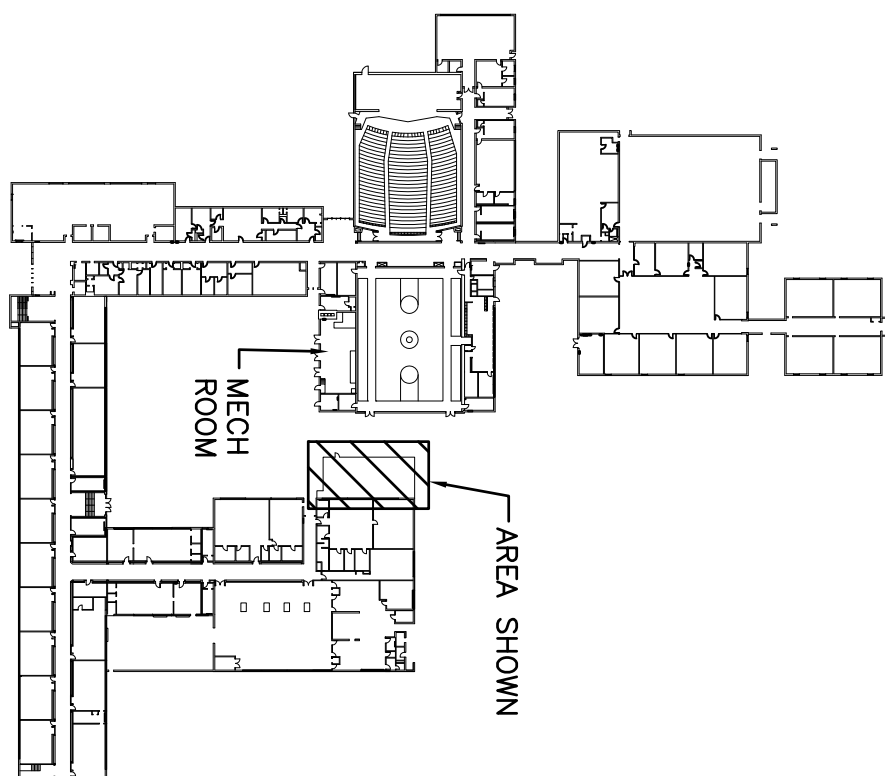
EDP EMERGENCY DISTRIBUTION PANEL

FCU FLOOD CONTROL UNIT

INT INTERRUPTER

TR TROUBLESHOOTING

MDL MAIN DISTRIBUTION SWITCHBOARD



KEY PLAN

NOT TO SCALE

E-1

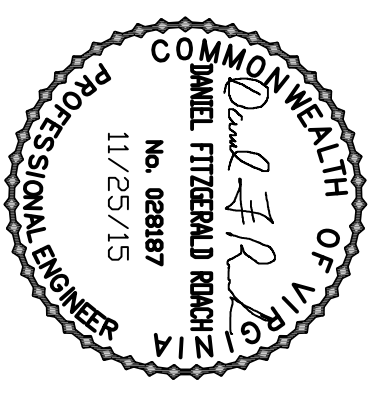
REV	DATE	DESCRIPTION	BY	APPROVED

JEFFERSON DAVIS MIDDLE SCHOOL  
CHILLER REPLACEMENT  
1458 TODDS LANE HAMILTON  
VIRGINIA 23066

ELECTRICAL LEGEND, NOTES AND DETAILS



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CHECKED BY DRE	DRAWN BY JUH	DATE 11/25/15	SCALE AS NOTED
PROJECT NO. 15-118	DRAWING NO. 15088 CHILLER.dwg		

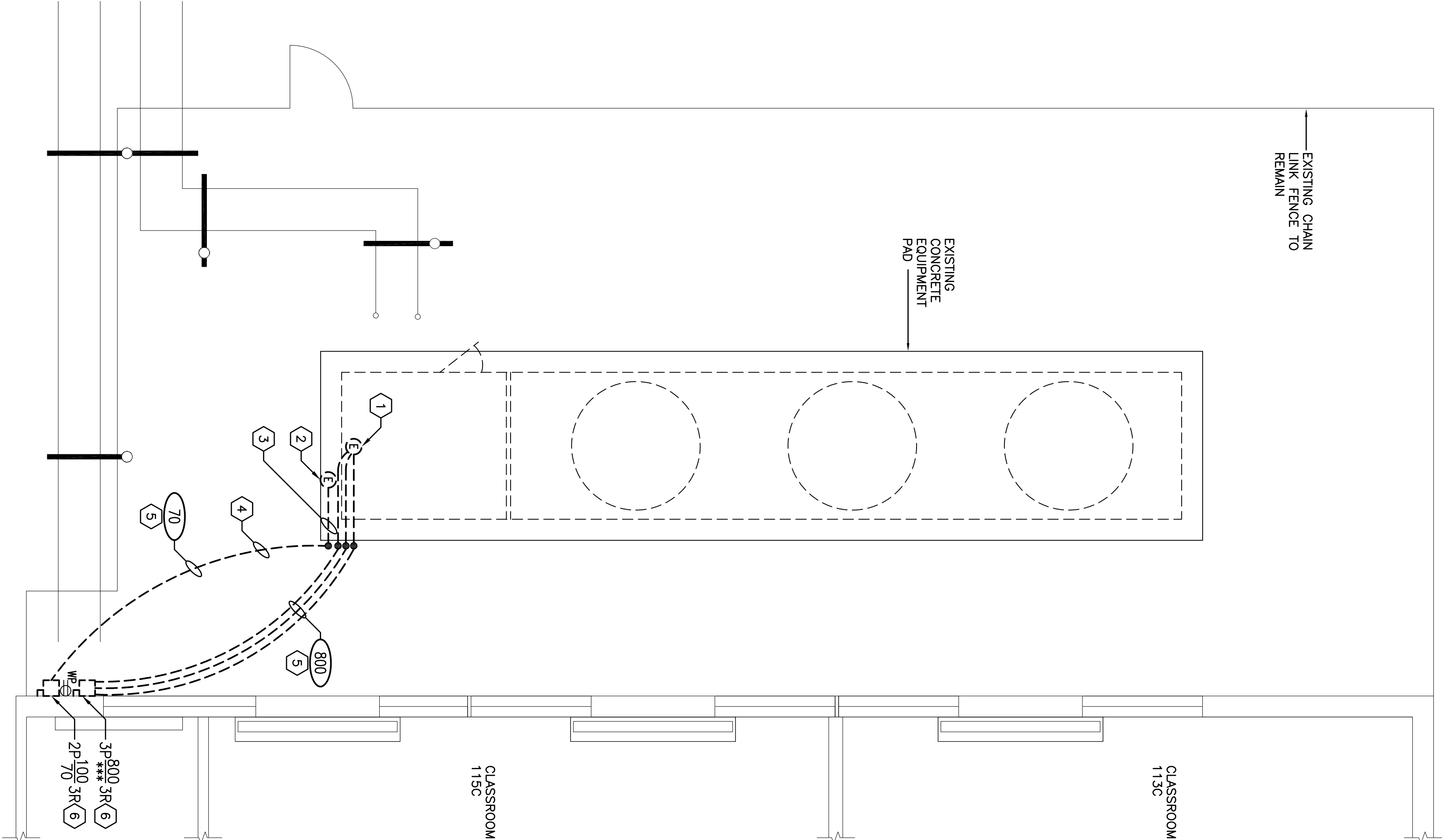
EXISTING FEEDER SCHEDULE				NOTES
FEEDER NUMBER	CONDUIT NO.	WIRE SIZE	NUMBER & SIZE PER CONDUIT	
800	3	3"	THREE 300 KCMIL AND ONE #10 GROUND	
70	1	3/4"	TWO #4 AND ONE #8 GROUND	

- 1 DISCONNECT EXISTING CHILLER.
- 2 DISCONNECT HEAT TAPE AND LIGHTING CIRCUIT.
- 3 REMOVE EXISTING HEAT TAPE FACTORY MOUNTED ON CHILLER.
- 4 REMOVE EXISTING HEAT TAPE INSTALLED ON PIPING.
- 5 REMOVE EXISTING CONDUCTORS. CONDUITS SHALL REMAIN FOR RE-USE.
- 6 REMOVE EXISTING DISCONNECT SWITCH. EXISTING LINE SIDE CONDUIT AND CONDUCTORS SHALL REMAIN FOR RE-USE.

DEMOLITION NOTES

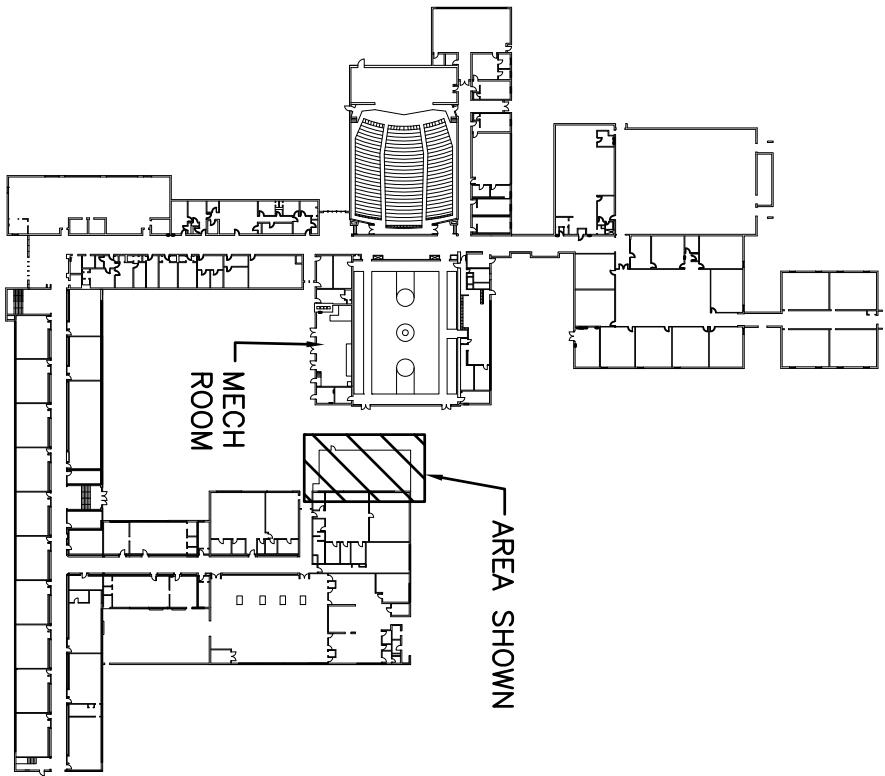
GENERAL DEMOLITION NOTES

1. REMOVE ALL TRASH AND DEMOLITION MATERIAL FROM SITE DAILY. ALL DEMOLITION MATERIAL SHALL BECOME THE CONTRACTORS RESPONSIBILITY.
2. STORE ALL EQUIPMENT TO BE REUSED IN BACK OF BUILDING. CLEAN AND VERIFY PROPER OPERATION BEFORE REINSTALLING.
3. COORDINATE ALL CONSTRUCTION AND DEMOLITION WITH OWNER.
4. DO NOT BLOCK OR OBSTRUCT PARKING LOT, EASEMENT, ETC. FOR STORING NEW EQUIPMENT.
5. ITEMS NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL REMAIN.
6. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROTECT AND RETAIN POWER TO ALL EXISTING ACTIVE EQUIPMENT WHICH SHALL REMAIN.
7. DISCONNECT, REMOVE OR RELOCATE ALL ELECTRICAL MATERIAL AND EQUIPMENT THAT INTERFERES WITH NEW INSTALLATION. REMOVE ALL CONDUIT AND WIRING OF INACTIVE CIRCUITS COMPLETE BACK TO THEIR ORIGIN AT THE ASSOCIATED PANELBOARD UNLESS OTHERWISE NOTED.
8. COORDINATE WORK SCHEDULE IN EXISTING BUILDING WITH OWNER'S REPRESENTATIVE.
9. ANY ELECTRICAL OUTAGES REQUIRED BY THE WORK SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE AND CONTRAINED IN WRITING. ANY OUTAGE SHALL NOT BE SCHEDULED DURING NORMAL BUSINESS HOURS AND ALL COSTS FOR OVERTIME SHALL BE INCLUDED IN THE BID.
10. ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL CHARGE.



ELECTRICAL DEMOLITION PLAN

SCALE: 1/4" = 1'-0"



KEY PLAN

NOT TO SCALE

REV	DATE	DESCRIPTION	BY	APPROVED

JEFFERSON DAVIS MIDDLE SCHOOL  
CHILLER REPLACEMENT  
1458 TODDS LANE HANPTON  
VIRGINIA 23666

ELECTRICAL DEMOLITION PLAN

ROACH CONSULTING ENGINEERS

28 COLLIER PLAZA, SUITE 200 B  
VIRGINIA BEACH, VA 23462  
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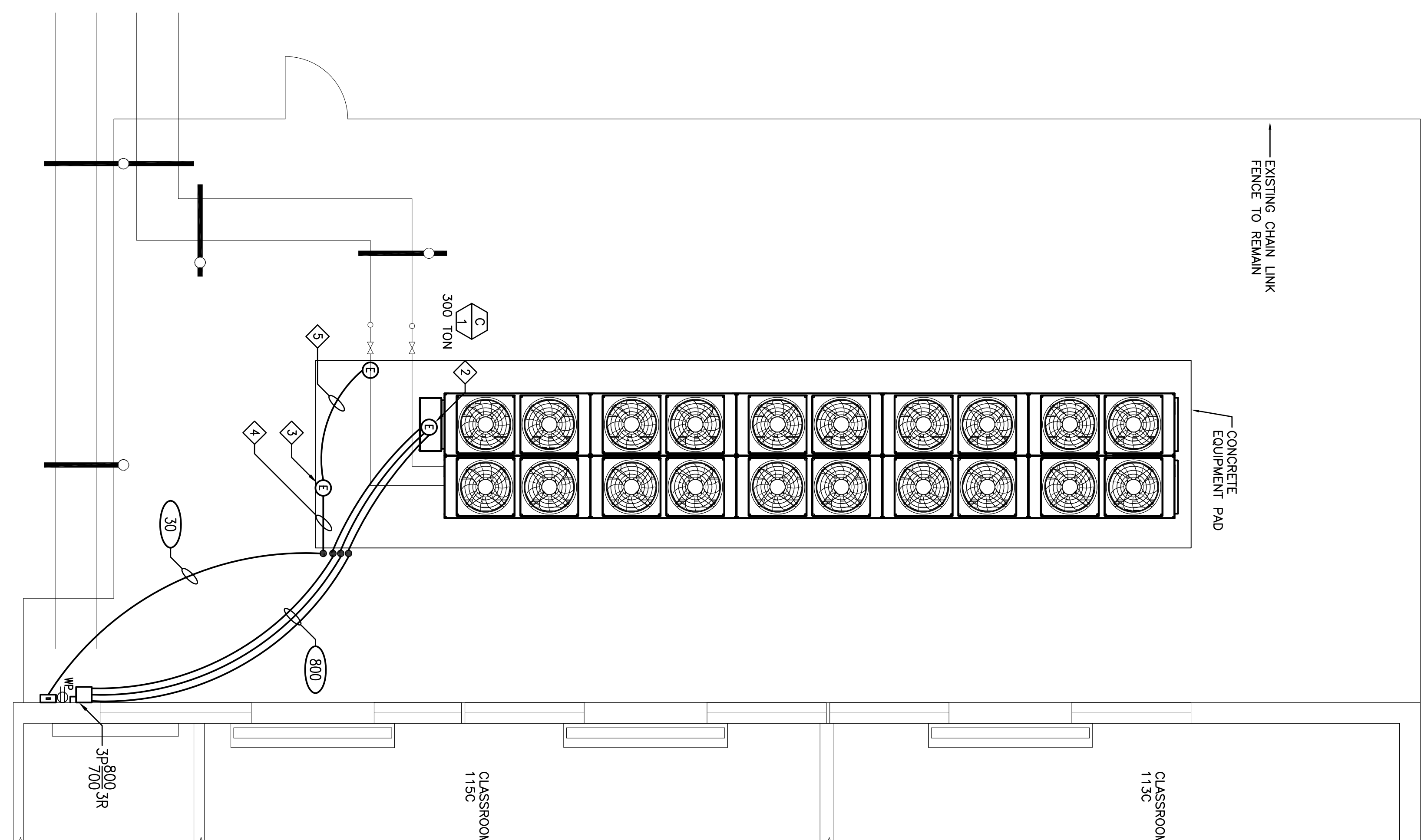
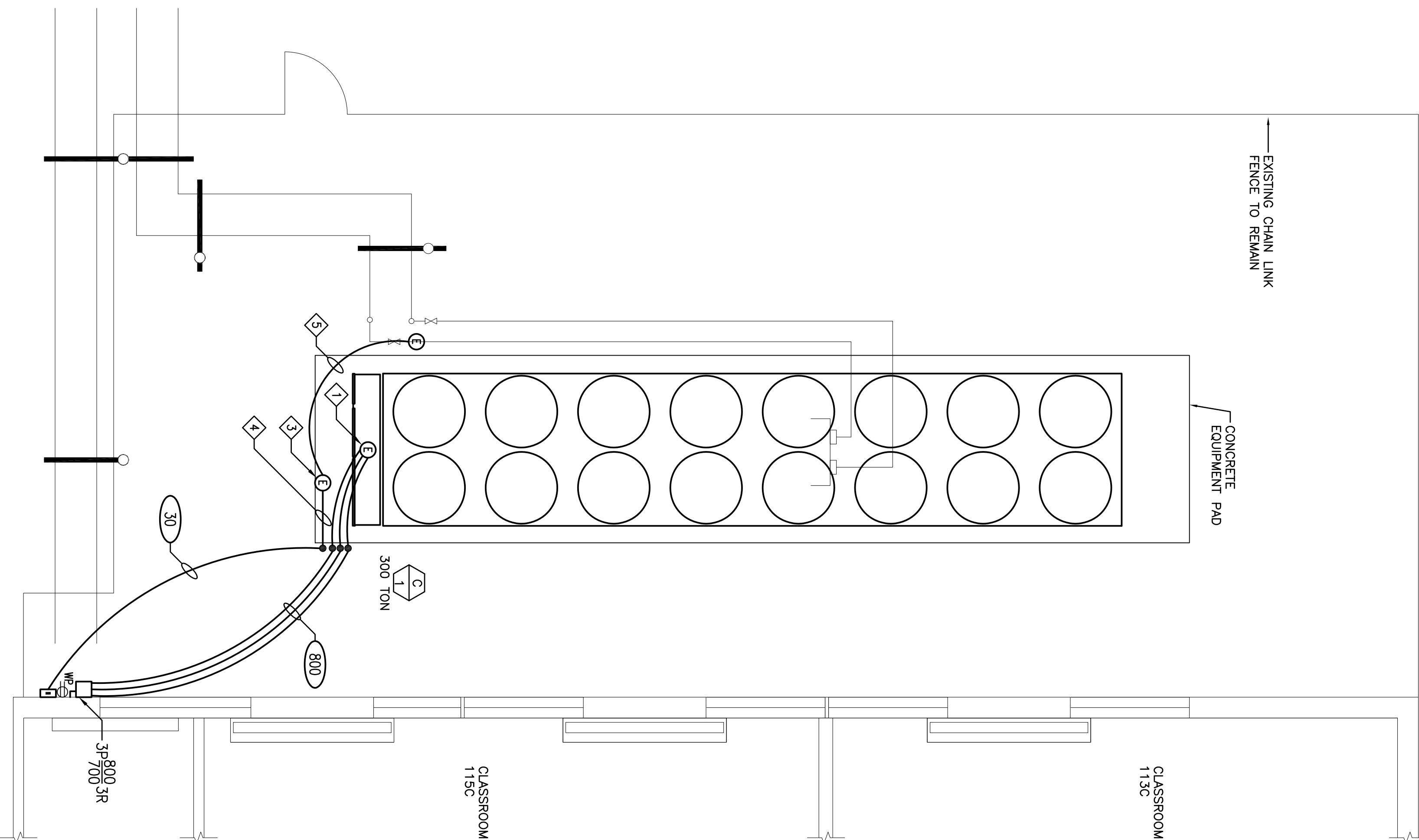
15-118

11/25/15

15088 CHILLER.dwg

AS NOTED





NEW FEEDER SCHEDULE			
FEEDER NUMBER	CONDUIT NO.	WIRE SIZE PER CONDUIT	NOTES
(800)	3	THREE 300 KCMIL AND ONE #10 GROUND	
(30)	1	TWO #10 NEUTRAL AND ONE #10 GROUND	1

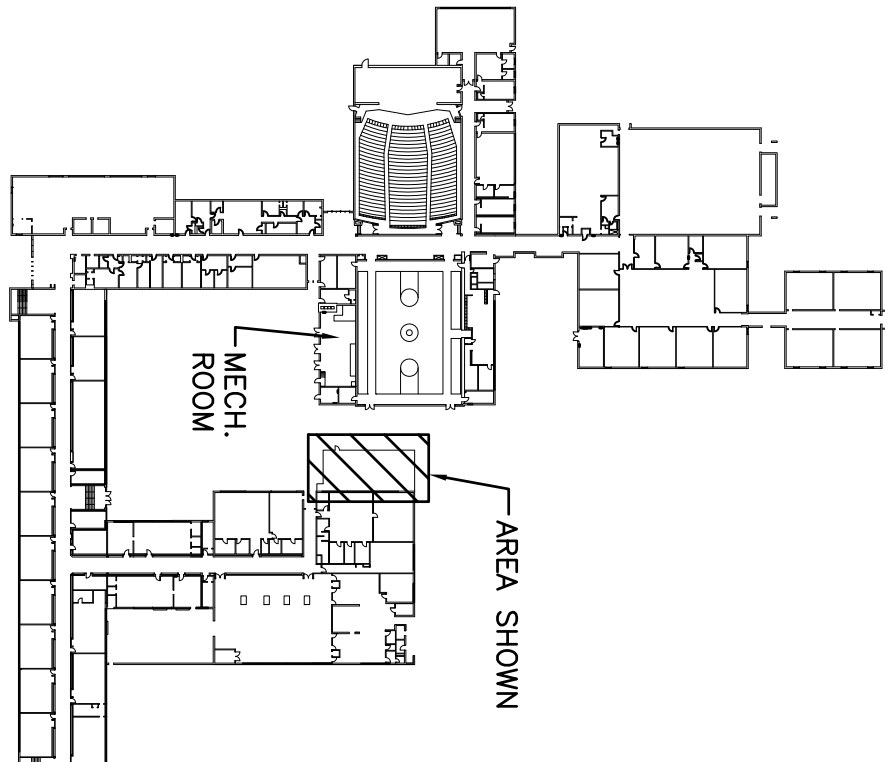
NOTES: 1. PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT

## NEW WORK NOTES

1. CONNECT NEW TAPE SCREEN CHILLER. REFER TO MECHANICAL DRAWINGS FOR CLARIFICATION OF BID OPTIONS.
2. CONNECT NEW MULTISTACK CHILLER. REFER TO MECHANICAL DRAWINGS FOR CLARIFICATION OF BID OPTIONS.
3. HEAT TAPE CONNECTION.
4. EXTEND HEAT TAPE CIRCUIT. RUN THROUGH BASE OF CHILLER, COORDINATE LOCATION OF CHILLER HEAT TAPE WITH THE CHILLER MANUFACTURER.
5. EXTEND HEAT TAPE CIRCUIT TO HEAT TAPING ON PIPING.

## GENERAL ELECTRICAL NOTES

1. UNLESS SPECIFICALLY NOTED TO BE EXISTING, ALL WORK AND MATERIAL SHOWN IS NEW AND SHALL BE PROVIDED BY THE CONTRACTOR. WHEREVER A "NEW TO EXISTING" ELECTRICAL CONNECTION IS REQUIRED, PROVIDE ALL ACCESSORIES, SPLICES, CONDUIT, FITTINGS, AND MISCELLANEOUS HARDWARE AND COMPONENTS AS NECESSARY TO EFFECT THE CONNECTIONS. PROVIDE ALL DRILLING, CUTTING AND PATCHING AS NECESSARY TO PROPERLY INSTALL ELECTRICAL CONDUITS AND ALL MATERIALS PROVIDED UNDER THE CONTRACT.
2. THE CONSTRUCTION CONTRACT DRAWINGS ARE BASED UPON AS-BUILT DRAWINGS AND VISUAL FIELD OBSERVATIONS AND WITHOUT DE-ENERGIZING ANY ELECTRICAL CIRCUITS AS REQUIRED TO OBTAIN DETAILED INFORMATION THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS IN ORDER TO AVOID CONFLICTS AND TO VERIFY THE ACTUAL EXISTING CONDITIONS OF ALL AFFECTED CIRCUITS AND EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL SIZE AND TYPES OF EXISTING CONDUCTORS AND CONDUITS THAT ARE BEING EXTENDED AS PART OF THE CONTRACT.
3. ALL WORK SHALL BE SCHEDULED AT TIMES THAT ARE CONVENIENT AND ACCEPTABLE TO THE OWNER. ENTIRE FACILITY SHALL REMAIN OPERATIONAL DURING THE ENTIRE CONSTRUCTION PERIOD. ALL REQUIRED POWER, WATER, AND TELEPHONE SHALL BE AVAILABLE TO THE CONTRACTOR AT EACH OUTRAGE SHALL BE PLANNED AHEAD OF TIME SO THAT THE DURATION OF EACH OUTAGE IS MINIMIZED. PROVIDE ALL NEW CONSTRUCTION TO THE FULLTEST EXTENT POSSIBLE PRIOR TO ANY GIVEN OUTAGE. WHERE A UTILITY COMPANY IS REQUIRED TO SHUTDOWN OR DE-ENERGIZE THEIR SYSTEM, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANY AND COORDINATING ALL ASSOCIATED EFFORTS. PROVIDE WRITTEN NOTICE TO THE OWNER OF ANY PLANNED POWER OUTAGE. NOTICE SHALL BE GIVEN TO THE OWNER A MINIMUM OF FORTY EIGHT (48) HOURS BEFORE THE OUTAGE. THE OUTAGE SHALL BE ALLOWED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE OWNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF ALL EXTERIOR SURFACES REQUIRED FOR PROPER INSTALLATION. ALL FINISHES SHALL BE REPAIRED AND PAINTED TO MATCH EXISTING SURROUNDING FINISHES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COST AND/OR DESIGN CHANGES REQUIRED IF A CHILLER SUBSTITUTION IS ACCEPTED BY THE OWNER.



## KEY PLAN

NOT TO SCALE

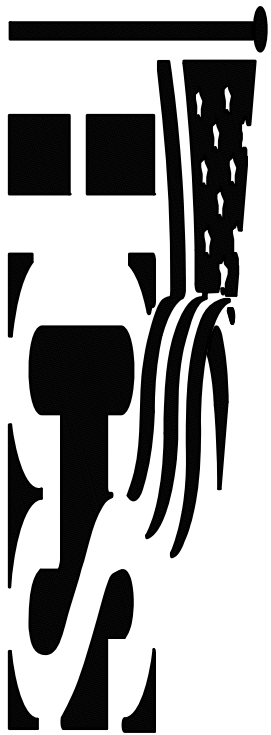
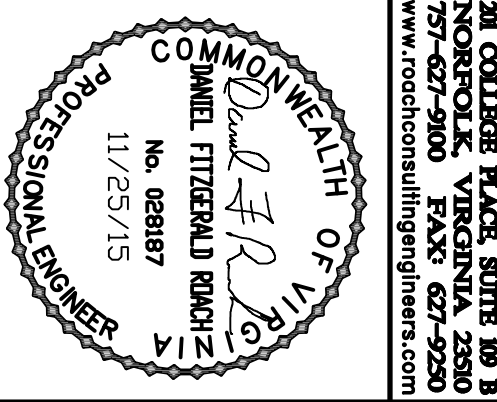
E-3			
REV	DATE	DESCRIPTION	BY APPROVER

JEFFERSON DAVIS MIDDLE SCHOOL

# CHILLER REPLACEMENT

1435 TODDS LANE HALL  
VIRGINIA 23666

## ELECTRICAL NEW WORK PLANS



CHECKED BY DFR	DRAWN BY JLH	DATE 11/25,
PROJECT No. 15-118	DRAWING No. 15088 CHILLER.dwg	

## ELECTRICAL NEW WORK PLAN - BASE BID

SCALE: 1/4" = 1'-0"

# ELECTRICAL NEW WORK PLAN - BID OPTION #1

SCALE: 1/4" = 1'-0"